

STANDARD OPERATING PROCEDURES (SOP)

FOR  
THE COAST GUARD'S TRAINING SYSTEM

Volume 4

JOB AIDS



[Coast Guard Performance Technology Center](#)  
[Office of Workforce Performance, Training and Development](#)  
[Assistant Commandant for Human Resources](#)

Coast Guard Headquarters  
Washington, DC  
November 2003

# TABLE OF CONTENTS

---

<b>Section I: Overview .....</b>	<b>1</b>
Introduction .....	1
Purpose .....	1
Target Audience .....	1
Background .....	1
Use of Job Aids .....	2
Approved Methods for Gaining Proficiency in Designing and Developing Job Aids.....	2
Assistance .....	3
Coast Guard Procedures for Producing Job Aids.....	4
<b>Section II: Coast Guard Procedures for Producing Job Aids.....</b>	<b>5</b>
Job Aid Analysis .....	5
Step 1: Collect Task Data .....	5
<b>Section II: Coast Guard Procedures for Producing Job Aids.....</b>	<b>6</b>
Step 2: Sort Task Data Through Memory Vs. Job Aid Filter .....	6
Step 3: Sort Tasks to be Job-Aided Through Training Support Filer.....	7
Step 4: Design and Develop Job Aids .....	8
Step 5: Validate Draft Job Aid.....	8
Step 5a: Edit the Draft Job Aid .....	9
Step 5b: Conduct Trials for Draft Job Aid .....	10
Step 5c: Revise the Draft Job Aid .....	11
Step 6: Troubleshoot the Draft Job Aid (optional) .....	11
Step 7: Submit Job Aid for Approval.....	11
Step 8: Deploy the Official Job Aid.....	12
Step 9: Maintain the Job Aid .....	12

## Section I: Overview

### Introduction

---

A job aid is a storage place for information other than human memory. Used on the job and accessed in real time, job aids are guides that support performance.

Some examples of job aids include:

- Armed Forces Recipe Cards
- Aviation Computerized Maintenance Cards
- Troubleshooting flowcharts
- Inspection checklists
- Tax form guides
- **Gas pump self-service directions**<sup>[S1]</sup>

### Purpose

---

This SOP is designed to provide the user with Coast Guard formal training system's guidance and standards for developing job aids.

### Target Audience

---

The target audience for this SOP includes all members of the Coast Guard involved in the analysis, design, development, implementation and evaluation of performance or instructional interventions in support of the Coast Guard Training System. That audience includes Human Performance Technology (HPT) practitioners, members assigned as instructors, course designers or course developers, contractors and Headquarters Program Managers.

### Background

---

Job aids should be used whenever appropriate for the following reasons:

1. Job aids do not forget information. Therefore, job aids are more reliable and consistent than human memory. The problem with relying on instruction alone is that humans forget details unless the details are reinforced frequently. Job aids help them remember details they might otherwise forget.
2. The Coast Guard can develop job aids three to four times faster than developing training materials designed for memorization.

---

Continued on next page.

## Section I: Overview (continued)

---

### Background (continued)

3. The Coast Guard can train the use of job aids three to four times faster than training the same tasks for storage in human memory.
4. Job aids can be revised faster than instructional materials used to teach for memorization.

Therefore, job aids are more reliable, consistent, and faster (thus less expensive) than traditional training to memory.

---

### Use of Job Aids

Program approved job aids shall be used when appropriate as determined by personnel trained and proficient in job aid design and development.

---

### Approved Methods for Gaining Proficiency in Designing and Developing Job Aids

Coast Guard personnel gain proficiency in the analysis, design, development and validation of job aids through graduation from one of the following courses and subsequent practice in actually designing and developing job aids:

- **Coast Guard Course Designer Course (CDC).** The Instructional Systems School at the Coast Guard Training Center in Petaluma, California teaches CDC on line.
- **“Developing Job Aids for Peak Performance”** workshop formerly known as the “Job Aids Workshop (JAWS).” SABA Knowledge Services owns this workshop and provides training at regular intervals for a set fee. The Coast Guard Training Center in Petaluma teaches this workshop (there are costs for instructional materials, travel and lodging); the Coast Guard’s Performance Technology Center (PTC) has people skilled in designing and developing job aids who consult with programs needing to develop job aids.

---

Continued on next page.

## Section I: Overview (continued)

---

### Approved Methods for Gaining Proficiency in Designing and Developing Job Aids (continued)

- SABA Knowledge Services three-part Peak Performance System workshops, “Optimizing Human Performance” (previously Front End Analysis), “Training Design for Peak Performance”, and “**Training Development for Peak Performance**” (formerly known as the Accomplishment-Based Curriculum Development (ABCD) workshops) also satisfy this requirement, particularly the second and third workshops that deal with the design and development of performance-based training materials. These are commercial workshops owned by Saba Performance Improvement Services. Personnel in TRACENs Petaluma and Yorktown have obtained certification to train Peak Performance System Workshops<sup>[S2]</sup>.
- Course Designers and Developers who are developing job aids for the Coast Guard can also use references such as Dr. Rossett’s A Handbook of Job Aids or Dr. Nelson’s Expert OJT <sup>[S3]</sup> training and materials. These references ([link to reference section](#)) (and others) follow the same procedures as SABA’s workshops for designing and developing effective and efficient job aids.

---

### Assistance

Schools that require assistance in the development of job aids can receive help from a graduate of any of the above curricula.

Graduates of the above curricula may be found at Coast Guard training centers, particularly at Petaluma and Yorktown.

---

## **Section I: Overview (continued)**

### **Coast Guard Procedures for Producing Job Aids**

---

Several kinds of stimuli call for the development of job aids. One is a front-end analysis (FEA) report that has identified several tasks that require job aid development. Another is a job task analysis that has identified several tasks in existing training that should be converted to job aids. Yet another is a program's decision to job aid a task as an effective and efficient means of passing knowledge, information and skills to the field. Still another is the result of course designers conducting job aid analysis on a group of tasks they have been asked to train.

The school responsible for providing the official skills, knowledge, and information regarding a Coast Guard task shall develop and validate job aids in accordance with the procedures described in the next section.

---

## Section II: Coast Guard Procedures for Producing Job Aids

### Job Aid Analysis

---

As part of a front-end or job task analysis, analysts will conduct job aid analysis. Schools will not routinely proceed toward job aid development without the benefit of the results of FEA or JTA, but if they have a situation in which they must design and develop job aids for existing (approved) training, then the responsible school shall conduct a job aid analysis. Graduates of one of the approved job aids curricula listed above shall perform the job aid analysis in accordance with guidelines in applicable curriculum and the standards listed in this SOP.

---

### Step 1: Collect Task Data

The first step in job aid analysis is collecting task data. Analysts conducting task data collection should use worksheets for this purpose (part of the SABA instructional materials) or similar tools.

Task data should cover:

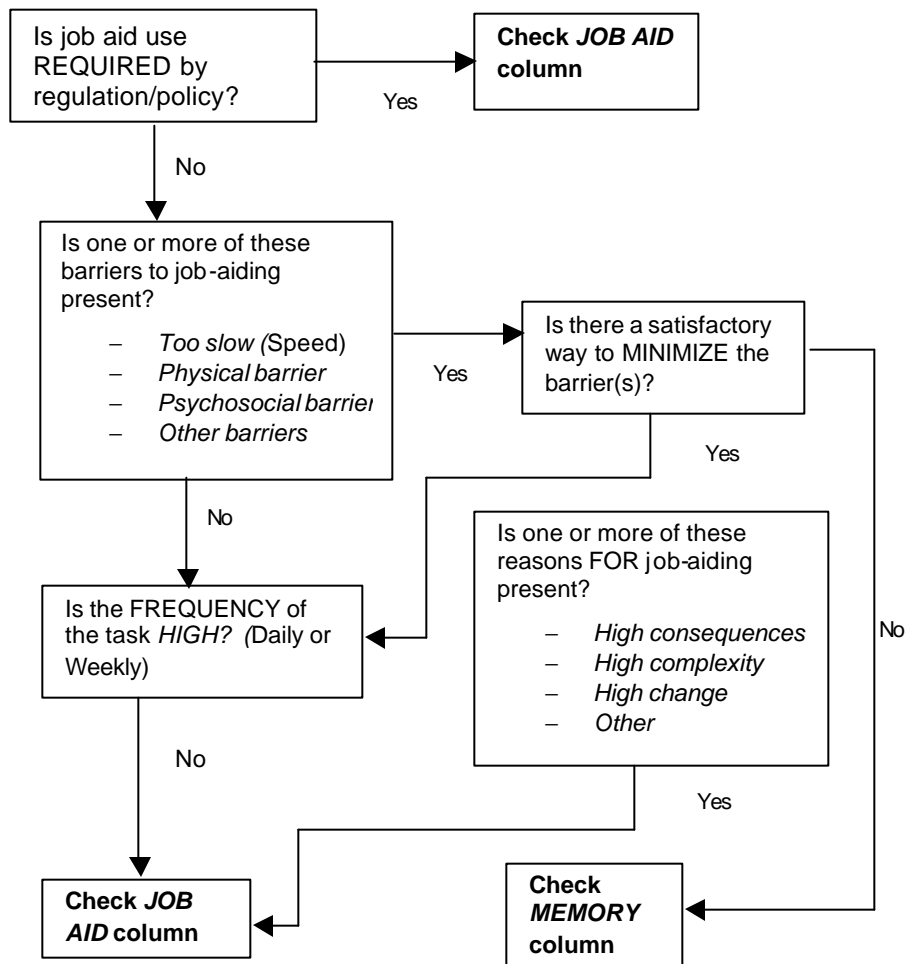
- **Speed.** How fast the worker must do the task.
  - **Barriers.** Are there physical/environmental barriers to using the job aid? And, can those barriers be minimized?
  - **Frequency.** How often does the worker have to do the task?
  - **Consequences.** What is the result of making a mistake in doing the task?
  - **Complexity.** How difficult is the task to do?
  - **Change.** How likely is the task to change in the next year or two?
  - **Other variables.** What other variables might rule out using a job aid on the job?
  - **Mandate.** Is there an organizational mandate or policy that states a job aid must be used to do the task?
-

## Section II: Coast Guard Procedures for Producing Job Aids

### Step 2: Sort Task Data Through Memory Vs. Job Aid Filter

The second step is to sort task data through a memory versus job aid filter. That step will identify:

- Tasks that should be converted to job aids.
- Tasks that must be trained to memory.



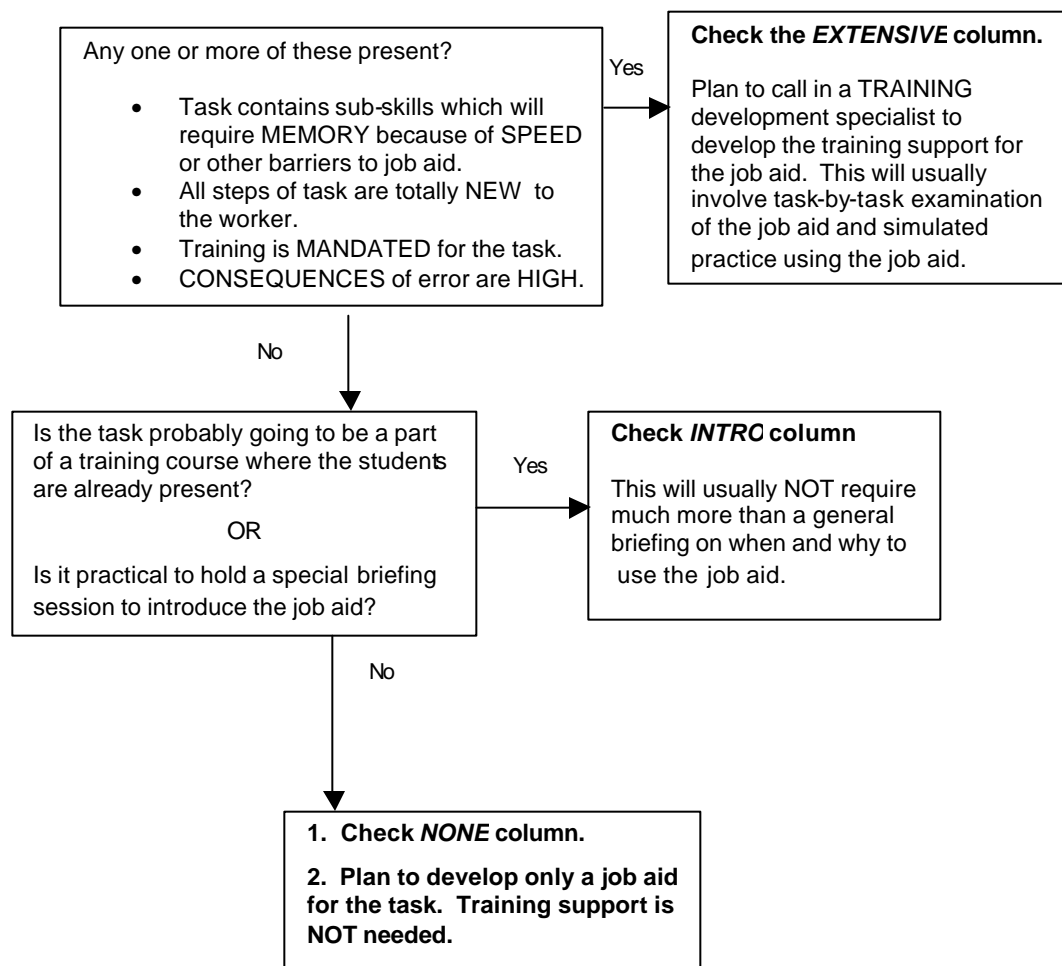


## Section II: Coast Guard Procedures for Producing Job Aids (continued)

### Step 3: Sort Tasks to be Job-Aided Through Training Support Filer

The third step is to sort those tasks identified as candidates for conversion to job aids through a training support filer. That step will identify job aids that require:

- no training support and can stand alone.
- introductory training.
- extensive training.



The results of job aid analysis, and the data considered in deciding the results, shall be included as part of the school's audit trail for the Instructional Systems Development (ISD) process.

## Section II: Coast Guard Procedures for Producing Job Aids (continued)

### Step 4: Design and Develop Job Aids<sup>[S4]</sup>

---

During the design and development phase, the responsible school shall design job aids as the first products to be developed.

The steps in this phase are:

- Describe detailed behavior (task steps) for each task to be job-aided (may include paradigmizing for tasks with branching decision points).
- Decide the format for the job aid:

If Task Is:	Then Format Should Be:
Decision-Making	Decision Table
	Algorithm
Sequential	Cookbook
	Worksheet

- Develop draft job aid.

Graduates of one of the approved job aid curriculum shall design and develop job aids in accordance with the guidance from their job aid curriculum and the standards listed in this SOP.

### Step 5: Validate Draft Job Aid

---

During the development phase, the responsible school shall validate a draft job aid for effectiveness and user-friendliness.

The steps for validation are editing, trying out, and revising the job aid.

The final job aid draft must also undergo several edits before finalization.

Graduates of one of the approved job aids curricula shall validate and edit the job aids in accordance with the guidance from their job aids curriculum and the standards listed in this SOP.

---

## Section II: Coast Guard Procedures for Producing Job Aids (continued)

### Step 5a: Edit the Draft Job Aid

Job aid developers shall conduct three edits of each draft job aid:

Edit for:	Steps:
Content	<ul style="list-style-type: none"><li>• Technical correctness</li><li>• Completeness</li><li>• No extraneous information</li><li>• All context information included</li><li>• Put user under stimulus control</li></ul>
Structure	<ul style="list-style-type: none"><li>• Context information at beginning?</li><li>• Format appropriate?</li><li>• Tells user when before do?</li><li>• Steps small enough?</li><li>• Information used together presented in same place?</li><li>• Drawings to left of illustrations?</li><li>• Enough white space?</li><li>• Critical information highlighted?</li><li>• Decision tables in boxes?</li><li>• Steps numbered for sequence?</li></ul>
Language	<ul style="list-style-type: none"><li>• Consistency</li><li>• Simplicity</li><li>• Clarity</li></ul>

## Section II: Coast Guard Procedures for Producing Job Aids (continued)

### Step 5b: Conduct Trials for Draft Job Aid

Job aid developers shall conduct trials to determine how well the draft job aid works. Put another way, can the user produce the accomplishment to Coast Guard standards, using the job aid?

**Try-out Preparations.** Ensure the individual trying out the job aid represents target users and has the same entry prerequisites as ultimate job aid users. Conduct supporting training (if any). Make sure you are conducting trials in as close to real-time, real job environment as possible. Steps for try-outs are:

Steps:	Actions:
1	Try-out draft job aid with one worker at a time in as close to real environment as possible.
2	Observe worker using job aid: <ul style="list-style-type: none"><li>• Do NOT help user.</li><li>• Provide anything left out and make note on job aid of missing material.</li></ul>
3	Stop worker if about to make a costly or dangerous mistake.
4	Make notes at time of try-out on your copy of job aid.
5	Conduct de-briefing with worker.

## Section II: Coast Guard Procedures for Producing Job Aids (continued)

### Step 5c: Revise the Draft Job Aid

Job aid developers shall use the results of trials and debriefing to revise the job aid.

Steps:	Action:
1	Revise job aid based on trials results.
2	Conduct at least one more trial.
3	Use results from trials to draft final job aid.
4	Conduct additional try-outs (at least one more).
5	Continue revising the job aid based on additional trial data.

### Step 6: Troubleshoot the Draft Job Aid (optional)

If the job aid developer has a job aid troubleshooting checklist available, the developer can use that tool for a final check of the draft job aid.

NOTE: Such checklists are available in the course materials referenced earlier. They are also available in reference materials such as ASTD's InfoLines, Dr. Rossett's Handbook of Job Aids, etc.

### Step 7: Submit Job Aid for Approval

Job aid developers shall submit finalized job aid to the appropriate Program Manager or Rating Force Master Chief (RFMC).

Developed by	Approved by			
Training Center (TC)	Training Officer	G-WTT	Rating Force Master Chief (RFMC)	Program Manager
Other Unit				

## **Section II: Coast Guard Procedures for Producing Job Aids (continued)**

### **Step 8: Deploy the Official Job Aid**

---

The applicable Program Manager or RFMC will deploy the approved job aid to field units. However, the job aid developer should coordinate with these people concerning deployment plans. Questions that may need to be answered are:

- Will the job aid be deployed as print material and if so, who will be responsible for printing, storing, etc. the job aids/
- Will the job aid be delivered as a CD-ROM? If so, who will burn the CDs and who will deploy them to applicable units?
- Other related logistical and “who is responsible/who pays?” questions.

NOTE: The Program Manager or RFMC may need TRACEN staff to assist with deployment plans.

---

### **Step 9: Maintain the Job Aid**

The job aid developer shall coordinate with the applicable Program Manager or RFMC to determine who will be responsible for job aid maintenance. Typically, if TRACEN staff have developed the job aid, then they will be responsible for ensuring the job aid is maintained (i.e., revised to keep up with changing qualification factors, policies and/or procedures).

---

Page: 1

[S1]Any reason why bold-faced?

Page: 3

[S2]But those courses are not on the 1540 annual schedule to my knowledge – believe they're just taken out-of-hide and conducted based on need.

Page: 3

[S3]Add Dr. Rossett's Handbook info to Analysis References.

Page: 8

[S4]Added design because that needs to go before job aid development.